

### REMARKS

Claims 1-40, 42 and 43 are currently pending in the subject application and are presently under consideration. Claims 1, 10, 13, 16, 18, 22, 29, 30, 31, 33, 34, 42, and 43 have been amended as shown on pages 2-9 of the Reply.

Favorable reconsideration of the subject patent application is respectfully requested in view of the comments and amendments herein.

#### **I. Rejection of Claims 1-3 Under 35 U.S.C. §103(a)**

Claims 1-3 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Lawrence in view of Taguchi, *et al.* It is respectfully submitted that this rejection should be withdrawn for at least the following reasons. Neither Lawrence nor Taguchi, *et al.*, individually or in combination, teach or suggest all features set forth in the subject claims.

The subject claims relate to a system and method for refining search query results from a general-purpose search engine based in part on the entry point through which the general-purpose search engine was accessed. When the general-purpose search engine is accessed *via* an entry point and a search query is executed, the search query results obtained by the general-purpose search engine can be passed to a tuning component associated with the entry point. The tuning component can filter and rank the search query results according to a statistical analysis that utilizes two distinct sets of data associated with the entry point: a first set of data expressly defined as relevant and a second set of data expressly defined as non-relevant. The training data can be explicitly categorized into one of these two sets of data, and search results can be filtered and ranked based on a comparison of each search result with both the relevant and non-relevant data set. In particular, amended independent claim 1 recites, *a tuning component that receives search query results of the general-purpose search engine and filters the search results based at least on criteria associated with the entry point through which the general-purpose search engine was accessed, the criteria comprises at least a first set of data categorized as relevant to a user's context and a second set of data categorized as non-relevant to the user's context, each search result is compared with both the first set of data and the second set of data to determine a relevance of the search result.*

As conceded in the Office Action dated September 21, 2007, Lawrence fails to disclose filtering search results from a general-purpose search engine. Lawrence therefore also fails to

teach the more specific case of filtering search results based on criteria that includes a relevant set of data and a non-relevant set of data (indeed, the Office Action also concedes that Lawrence does not teach the use of relevant and non-relevant data sets to determine the relevance of a search result). Taguchi, *et al.* fails to remedy these deficiencies in Lawrence. Although Taguchi, *et al.* discloses a file searching system that can retrieve search results from a document index and perform a subsequent filtering on the retrieved results, the cited reference only teaches that this filtering is based on a *user's access rights* to a retrieved document. This in no way suggests filtering search results based on a set of data explicitly categorized as relevant to a user's context and a set of data explicitly categorized as non-relevant to a user's context, and indeed such features are not disclosed in either cited reference. In suggesting that the combination of Lawrence and Taguchi, *et al.* renders the subject claims obvious, the Examiner ostensibly equates a user's *permission* to view a document (*i.e.* the user's access rights, as disclosed in Taguchi, *et al.*) with a document's *relevance* to the user (page 6 of the Office Action: "...with the motivation of filtering documents to include only those in which a user is interested (e.g. in this specific case, documents which the user is permitted to view)"), when in fact there is no correlation between these two features of a document.

In view of the aforementioned deficiencies of the cited references, it is respectfully submitted that the combination of these two references in the manner suggested by the Examiner fail to make obvious applicant's claimed subject matter as recited in amended independent claim 1 (and claims 2 and 3, which depend there from). Specifically, the use of relevant and non-relevant data sets to filter a received set of search results is in no way suggested by the cited references, individually or in combination. It is therefore requested that this rejection be withdrawn.

## **II. Rejection of Claims 4-28 and 42-43 Under 35 U.S.C. §103(a)**

Claims 4-28 and 42-43 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Lawrence in view of Taguchi, *et al.* as above and in further view of Hansen, *et al.* It is respectfully requested that this rejection be withdrawn for at least the following reasons. The cited references, individually or in combination, do not teach or suggest each and every feature of the subject claims.

As discussed *supra*, the filtering and ranking mechanism disclosed in the subject claims can utilize training data that is *explicitly delineated* into two categories: a first set of data deemed to be relevant to a user's context, and a second set of data deemed to be non-relevant to the user's context. When a general-purpose search engine returns a set of search results, each result can be compared with both the relevant and non-relevant data sets to determine the relevance of the returned result. The result can then be returned to the user, or alternatively held back, based on this determined relevance. In particular, amended independent claim 13 (and similarly amended independent claims 1 and 29) ***the training data comprises a first set of data categorized as relevant to a search context of a user for the entry point and a second set of data categorized as non-relevant to the search context of the user, each search query result is compared with the first set of data to determine a degree of relevance of the search result, and each search result is compared with the second set of data to determine a degree of non-relevance of the search result.***

As discussed *supra*, neither Lawrence nor Taguchi, *et al.* disclose the use of a relevant data set and a non-relevant data set to facilitate filtering search results. However, the Examiner maintains that Hansen, *et al.* discloses these features, citing in particular the method disclosed in Hansen, *et al.* of grouping clusters of queries based on the similarities of their subsequent search sessions, and assigning a relevance weight to each group (or query cluster). However, applicant's representative submits that there are several distinctions between the data sets disclosed in Hansen, *et al.* and those taught by the subject claims. First, unlike the subject claims, Hansen, *et al.* does not *explicitly categorize* training data as either being relevant or non-relevant, as taught by amended independent claim 13. Rather, the cited art assigns a *relevance score* for each query cluster used as training data. While this approach may indicate a *relative relevance* of the items in a set of training data, it is materially distinct from explicitly categorizing a first set of data as relevant to a user context and categorizing a second set of data as non-relevant to the user context. Moreover, since no explicitly categorized set of non-relevant data is defined in Hansen, *et al.*, there can be no *comparison between a search result and such a set of non-relevant data*, as taught in amended independent claims 1, 13, and 29.

In addition to the features discussed *supra*, the subject claims also teach a method for automatically recording the relevant and non-relevant training data sets during a search session. Specifically, when a user selects one of the filtered search query results presented by the tuning

component, that result can be automatically recorded by the training component as relevant to the search context, while results that had been ranked higher than the selected result can be automatically added to the category of non-relevant data. In particular, amended independent claim 22 (and similarly amended independent claim 34) recites, *storing a query result selected by a user in a first data set categorized as relevant; storing at least one unselected query result that is ranked higher than the selected query result in a second data set categorized as non-relevant; and including the first data set and second data set in the set of training data associated with the entry point employed to access the general purpose search engine.*

Although it is conceded in the Office Action that Lawrence does not disclose this feature, the Examiner maintains that the PageRank algorithm disclosed in Hansen, *et al.* anticipates recording a higher ranked query result as non-relevant when a lower ranked result is selected by the user. Applicant's representative respectfully disagrees with this interpretation of Hansen, *et al.* The cited reference uses the PageRank algorithm to group (or cluster) relevant queries together based on the similarities of the subsequent search sessions. Although, as the Examiner notes, this can result in adding URL data to a relevant cluster based on a user's feedback (e.g. the search results selected by the user), this in no way teaches or suggests *storing higher ranked but unselected* search results to any kind of data set, much less a specifically designated set of non-relevant data as disclosed in the subject claims. Indeed, Hansen, *et al.* explicitly discloses that *only those search results that are selected by the user* are considered during query clustering ("Our technique is different in that we consider only those pages that were actually selected by a user during a search task." Page 137, Column 1, Paragraph 4). Hence, not only does Hansen, *et al.* fail to teach storing an *unselected* query result in a non-relevant data set when a lower ranked result is selected by a user, the cited art *expressly teaches away* from these technique.

The Examiner presents further arguments with regard to this feature, noting in particular the ability of the PageRank algorithm of Hansen, *et al.* to increase the relevancy of a web page based on the amount of time a user spends on that page. Citing this feature of Hansen, *et al.*, the Examiner contends that spending time on a given web page increases that page's relevancy, while at the same time decreasing the relevancy of other pages. While this observation may be true in the abstract, it in no way suggests the *actively storing* unselected search results in a set of non-relevant data, or indeed utilizing the unselected results in any way. This act of storing higher ranked but unselected search results in a non-relevant data set is clearly and

unambiguously disclosed in amended independent claims 22 and 34, and is in no way suggested by any combination of the references cited by the Examiner.

In view of at least the forgoing, it is respectfully submitted that Lawrence and Taguchi, et al., alone or in combination with Hansen, et al., do not teach or suggest each and every feature set forth in amended independent claims 1, 22, 29, and 34 (and all claims depending there from), and therefore fails to make obvious applicant's claimed subject matter. Therefore, this rejection should be withdrawn.

### **III. Rejection of Claims 29-40 Under 35 U.S.C. §103(a)**

Claims 29-40 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Lawrence in view of Hansen, *et al.* However, amended independent claim 29 recites, *providing a second set of data categorized as non-relevant that is used by the component to discern query results unrelated to the search context.* As discussed above with respect to amended independent claims 1 and 13, neither of the cited art references disclose this feature. Moreover, amended independent claim 34 recites, *recording at least one higher ranked but unselected query result as non-relevant when a lower ranked result is selected by the user,* and as discussed above with respect to amended independent claim 22, the cited references also fail to teach this aspect of the subject claims. It is therefore respectfully requested that this rejection be withdrawn with respect to amended independent claims 29 and 34, and all claims depending there from.

**CONCLUSION**

The present application is believed to be in condition for allowance in view of the above comments and amendments. A prompt action to such end is earnestly solicited.

In the event any fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063 [MSFTP444US].

Should the Examiner believe a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact applicant's undersigned representative at the telephone number below.

Respectfully submitted,

AMIN, TUROCY & CALVIN, LLP

/Himanshu S. Amin/\_\_\_\_\_

Himanshu S. Amin

Reg. No. 40,894

AMIN, TUROCY & CALVIN, LLP  
24<sup>TH</sup> Floor, National City Center  
1900 E. 9<sup>TH</sup> Street  
Cleveland, Ohio 44114  
Telephone (216) 696-8730  
Facsimile (216) 696-8731